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(54) Title: **USE OF METAL TRICARBONYL COMPLEXES AS RADIOTHERAPEUTIC CHEMOTOXIC AGENTS**

(57) Abstract: The invention relates to the use of metal tricarbonyl compounds of the general formula $[M(CO)_3L_n]'$, wherein M is rhenium or technetium or an isotope thereof and L is a ligand, for the preparation of a medicament for the treatment of cancer that is both radiotherapeutic and chemotoxic when a radioactive metal is used and chemotoxic when cold rhenium or macroscopic amounts of long-lived Tc-99 is used. The medicament is in particular chemotoxic by causing intrastrand linkages in DNA. In a specific embodiment at least one of L is not OH₂. The invention further relates to novel compounds of the general formula $[M(CO)_3X_1X_2X_3]^+$ and their use, wherein M is rhenium or technetium or an isotope thereof and at least one of X₁, X₂ and X₃ is a monodentate ligand; or two of X₁, X₂ and X₃ are part of a bidentate ligand and the other one is optionally a monodentate ligand.

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